

A Summary of Insects Attracted to Liquid Baits.

By S. W. FROST, The Pennsylvania State College.

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MISCELLANEOUS INSECTS.

Several species of Chrysopidae, reported in an earlier paper,⁴ have been trapped in rather large numbers. The addition of certain attractants, especially sodium arsenite, amyl acetate, pinene and citrene, increased the catches noticeably.

A species of *Phryganca* (Trichoptera) came to baits in considerable numbers during June; 112 were taken in 1933. The presence of this species was conspicuous every season that baits were under observation.

Other insects such as Membracidae, Phymatidae, Jassidae and Hemerobiidae were taken in significant numbers. Twelve species of Membracidae, recovered from baits, were determined by Dr. W. D. Funkhouser. These were largely chance collections.

Spiders were also taken in noticeable numbers in many of the baits.

EXPLANATION OF THE TABLE.

For purposes of condensation in the following table, several species are indicated by their generic names: *Glischrochilus fasciatus*, *Euphoria inda* and *Synanthedon scitula*. The oriental fruit moth is designated as O. F. M. The first four tests of 1933 were conducted to determine the efficiency of different types of traps, using syrup 1-20 without an attractant. The first five tests of 1934 were conducted for the same purpose, but anethol was added to increase the catches.

⁴ Beneficial Insects Trapped in Bait Pails. ENT. NEWS 30: 153-157, 1927.

Insects taken in baits during 1933.

	COLEOPTERA			DIPTERA		
	Glischro- chilus	Euph- oria	Ceram- bycidae	Taban- idae	Syrph- idae	Ortal- idae
¼ inch screen	958	86	0	3	69	69
½ inch screen	772	64	5	5	60	92
With baffles	747	165	25	7	36	72
Quart glass	1106	17	30	2	80	45
Syrup 1-20	1200	286	17	16	53	68
Soap	1729	194	27	33	100	104
Sodium oleate	1267	128	15	40	77	72
Sodium arsenate	701	166	61	5	57	64
Methyl cinnamate	935	142	14	13	40	71
Methyl allephenol	1332	153	29	16	128	90
Formaldehyde	747	22	13	6	75	54
Amyl acetate	1059	581	32	16	96	113
Potassium cyanide	211	22	22	4	35	192
Citral	382	167	14	7	20	65
Acetone	298	42	13	1	19	56
Citric acid	457	27	18	16	57	161
Malic acid	238	10	13	10	75	201
Benzoic acid	27	0	5	5	38	6
Succinic acid	258	7	9	2	35	53
Salicylic acid	122	5	2	4	27	20
Tartaric acid	425	11	30	6	36	34
Butyric acid	174	0	4	8	31	23
Acetic acid	553	11	7	5	19	40
Formic acid	808	13	6	7	20	49
Boric acid	176	16	15	3	33	29
Oleic acid	157	28	11	26	31	21
Oxalic acid	79	3	3	3	22	21
Tanic acid	139	15	2	4	14	2
Pieric acid	138	0	0	1	22	8
Carbolic acid	160	27	9	1	35	15
Lactic acid	81	4	5	5	22	13
Propionic acid	153	3	1	4	10	29
Gallie acid	80	2	2	2	20	15
Cinnamic acid	4	12	0	2	0*	3
Camphoric acid	71	13	4	35	2*	15
Chloric acid	37	19	7	5	1*	12
Arseneous acid	24	5	2	2	1*	8
Glycerine	120	10	13	0	57	14
Calcium carbonate	89	10	9	2	23	14
Saponin	194	7	11	1	7	28
Totals	18,208	2,493	505	333	1,583	2,061

* Missed the peak of emergence or of flight.

Insects taken in baits during 1933.

O.F.M.	LEPIDOPTERA			HYMENOPTERA			NEUROPTERA
	Noctu- idae	Synan- thodon	Peach borer	Honey bee	Vesp- idae	Polis- tes	Chryso- pidae
465	104	25	1	1	14	6	21
202	272	77	12	1	39	21	27
1201	728	105	28	16	11	11	64
825	1256	78	58	19	66	32	48
206	431	41	7	11	13	15	33
1651	1633	136	17	18	41	31	69
1156	858	110	20	9	34	10	56
304	765	48	1	5	13	12	111
1881	1316	68	51	4	36	20	62
3917	1669	159	29	56	35	28	88
1104	1493	74	18	3	60	12	17
2097	2296	202	47	13	65	47	100
151	54	64	13	1	0	0	22
1962	325	40	11	46	1	1	100
64	25	57	1	0	0	1	8
853	670	165	18	4	18	9	26
495	779	168	6	5	13	8	26
220	78	75	0	0	2	1	4
1779	279	219	14	3	24	10	20
1269	258	48	6	2	12	8	11
1087	1411	185	8	3	27	23	34
151	199	28	0	3	16	4	6
934	729	75	1	5	45	10	21
870	1296	51	9	8	19	9	13
199	60	5	2	1	3	11	26
1534	196	25	5	1	4	4	20
743	226	11	5	1	3	11	15
584	208	17	2	2	16	15	31
845	158	9	7	4	11	10	8
492	237	16	3	0	10	7	9
698	116	19	3	0	2	7	22
418	171	1	2	1	6	6	6
691	391	5	1	1	3	7	9
66*	26*	1*	7	1	3	1	6*
942*	471*	4*	12	0	16	14	22*
370*	96*	2*	16	0	3	9	10*
27*	41*	0*	1	0	3	0	6*
369	161	19	0	1	1	4	9
78	53	8	2	1	1	3	15
115	37	3	2	0	6	2	23
33,018	21,572	2,443	446	250	695	440	1,224

Insects taken in baits during 1934.

	O.F.M.	Noctu- idae	Peach borer	Leaf roller	Bud Moth	Euph- oria	Honey bees	Chry- so- pidae
¼ inch screen	3990	441	0	6	6	12	4	96
½ inch screen	4450	668	6	11	5	24	8	140
With Baffles	5697	2033	10	23	12	85	9	225
Enamel traps	5629	2695	8	26	38	162	22	154
Quart glass *	2253	511	9	1	0	12	4	120
Syrup 1-20	2292	1506	9	29	4	81	1	107
Methyl allephenol	5162	1337	8	16	11	53	4	169
Cresol	480	754	3	0	10	381	10	96
Anisol	1587	1054	8	5	17	682	6	182
Thymol	1560	1573	4	1	5	195	5	153
Methyl cinnamate	2754	1701	2	9	7	183	2	136
Ethyl cinnamate	4365	1181	4	8	10	137	9	200
Propyl acetate	5735	1692	5	15	11	275	9	241
Terpinyl acetate	4798	578	3	5	14	329	1	170
Geranyl acetate	1131	822	2	10	9	195	2	191
Amyl acetate	5458	1733	3	11	20	313	3	264
Amyl valerate	1804	1558	7	6	17	264	4	282
Amyl formate	1510	2190	6	17	29	170	9	191
Amyl salicylate	2397	2194	3	8	24	147	9	224
Benzyl aldehyde	1493	1224	3	14	14	115	2	62
Cinnamic aldehyde	1897	1183	2	22	14	30	10	46
Formaldehyde	3510	2567	5	1	24	75	5	76
Bromo styrene	1438	1247	3	37	17	268	6	108
Pinene	4383	1408	7	11	17	557	9	458
Citrene	2777	1009	6	6	24	141	9	440
Borneol	3296	1385	7	14	26	233	4	122
Piperonal	4191	2556	11	9	8	193	38	133
Citral	3869	951	2	10	16	164	107	214
Furfural	4699	1424	13	27	20	233	6	109
Safrol	6541	1660	7	11	29	243	6	383
Eucalyptol	2344	1431	4	25	15	351	1	172
Terpinol	3518	1824	5	12	10	81	6	263
Helmitol	2278	1124	4	21	5	99	5	58
Linalool	7165	1622	6	28	9	136	13	184
Geraniol	2786	807	2	4	17	122	8	257
Almond oil	3163	1625	4	7	25	80	3	85
Anise oil	4460	1352	2	5	13	92	18	239
Fennel seed oil	4983	1296	6	5	9	96	5	220
Rose geranium oil	1843	805	0	2	8	162	4	207
Lemon oil	1917	562	4	3	7	317	4	304
Orange oil	2176	668	2	7	9	224	7	343
Turpentine*	291	186	5	..	..	61	1	347
Eugenol *	728	197	..	..	..	18	3	206
Pine oil *	105	116	..	..	..	121	0	301
Linalool No syrup *	27	9	..	..	..	0	8	9
Totals	138,330	56,460	210	488	585	7,912	409	8,687

* Duration of these baits, 12 weeks. All others, 22 weeks.